



**WATER SAMPLING AND REPORTING SERVICES**

**COLUMBIA PUBLIC SCHOOLS  
GENTRY MIDDLE SCHOOL  
4200 BETHEL STREET  
COLUMBIA, MISSOURI**

Prepared for:  
**COLUMBIA PUBLIC SCHOOLS  
COLUMBIA, MISSOURI**

Prepared by:  
**GEOTECHNOLOGY, LLC, DBA UES  
ST. LOUIS, MISSOURI**

Date:  
**DECEMBER 21, 2024**

Project No.:  
**J044517.01**

**SAFETY  
TEAMWORK  
RESPONSIVENESS  
INTEGRITY  
VALUE  
EXCELLENCE**



December 21, 2024

Mr. David Seamon  
District Project Manager  
Columbia Public Schools  
1818 West Worley Street  
Columbia, Missouri 65203

Re: Water Sampling and Reporting Services  
Columbia Public Schools  
Gentry Middle School  
4200 Bethel Street  
Columbia, Missouri  
Project No. J044517.01

Dear Mr. Seamon:

In accordance with Columbia Public Schools' (CPS) Request for Proposal No. C-24043, dated October 10, 2023, Geotechnology, LLC, dba UES, is pleased to provide this drinking water sampling report for the referenced project. Our scope of services included flushing and sampling of drinking water from potable water outlets, laboratory analysis of water samples, and a letter report.

#### **SITE AND PROJECT DESCRIPTION**

The subject property consists of the existing Columbia Public Schools Gentry Middle School, located southeast of the intersection of Bailey Drive and Bethel Street in Columbia, Missouri. The purpose of the drinking water sampling was to identify potable water outlets that may require remediation in accordance with the State of Missouri's *Get the Lead out of School Drinking Water Act* (RSMo 160.077).

#### **DRINKING WATER SAMPLING**

RSMo 160.077 sets standards for lead concentrations in school drinking water, stating that each Missouri school shall provide drinking water with a lead concentration level below five (5) parts per billion (ppb). This Act requires schools to conduct the inventory, sampling, remediation, and monitoring at all potable drinking water outlets used or potentially used for drinking, food preparation, and cooking or cleaning utensils.

In general conformance with the RSMo 160.077 requirements, and the Environmental Protection Agency's (EPA) *3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities* manual, initial water flushing and sampling activities were conducted on January 15 and 16, 2024, by Mr. Brad Lohrum, a Missouri-licensed lead risk assessor. Mr. Lohrum was assisted by Mr. Bob Haefner, a Missouri-licensed lead risk assessor, and Mr. Jon Tuetken, an



environmental scientist with UES. Copies of training certificates and lead licenses for Messrs. Lohrum and Haefner are included in Appendix A.

An inventory of potable drinking water outlets was provided to UES by CPS. UES personnel sampled the identified outlets utilizing the EPA’s “first-draw” methods. The identified outlets were flushed, then allowed to sit undisturbed for a period of 8-18 hours. Following this stagnation period, the first 250 milliliters (ml) of water expelled from the outlets were collected in laboratory-provided containers. Copies of the drinking water sampling forms, which include a list of sample locations, and the times and dates of flushing and sampling activities, are included in Appendix B. Floor plans depicting approximate sample locations are included as Figures 1 and 2.

Using standard chain-of-custody procedures, the drinking water samples were submitted to Teklab, Inc. of Collinsville, Illinois, an independent, certified Missouri Department of Natural Resources (MDNR) Drinking Water and National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, for analysis of lead content via EPA Method 200.8: *Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry*.

## RESULTS

Laboratory analyses detected the presence of lead at or above 5 ppb in the following samples.

**TABLE 1  
 DRINKING WATER OUTLETS AT OR ABOVE 5 PARTS PER BILLION**

Sample Number / Location and Fixture Type	Results
GMS-15 / Room 150 Left-hand Sink	70.8 ppb
GMS-17 / Room 150 Right-hand Sink	28.2 ppb
GMS-19 / Room 152 Sink	5.1 ppb
GMS-22 / Room 153 Red Sink	16.1 ppb
GMS-23 / Room 153 Blue Sink	14.2 ppb
GMS-24 / Room 153 Green Sink	13 ppb
GMS-25 / Room 153 Yellow Sink	20.7 ppb
GMS-26 / Room 153 Orange Sink	7.5 ppb
GMS-27 / Room 155 Sink	12.7 ppb
GMS-28 / Room 160 Sink	47.2 ppb
GMS-29 / Room 160 Bubbler	5.3 ppb
GMS-39 / Room 167 Left Center Sink	10 ppb
GMS-46 / Room 101 Sink	19.3 ppb
GMS-50 / Room 150 Sink	8.1 ppb
GMS-52 / Room 107 Sink	37.1 ppb
GMS-55 / Room 106 Sink	26.5 ppb
GMS-56 / Room 108 Left-hand Sink	17.6 ppb



Sample Number / Location and Fixture Type	Results
GMS-57 / Room 108 Right-hand Sink	20.2 ppb
GMS-58 / Room 108 Eye Wash Sink	8.2 ppb
GMS-62 / Room 111 Sink	33.3 ppb
GMS-64 / Room 113 Sink	17.1 ppb
GMS-66 / Room 115 Sink	12 ppb
GMS-68 / Room 116 Left-hand Sink	18 ppb
GMS-69 / Room 116 Right-hand Bubbler	30.2 ppb
GMS-70 / Room 117 Sink	16.3 ppb
GMS-72 / Room 118 Right-hand Sink	32.1 ppb
GMS-73 / Room 118 Eye Wash Sink	14.2 ppb
GMS-74 / Room 218 Right-hand Sink	42.4 ppb
GMS-75 / Room 218 Eye Wash Sink	33.1 ppb
GMS-76 / Room 217 Sink	23.7 ppb
GMS-78 / Room 216 Left-hand Sink	18.7 ppb
GMS-79 / Room 216 Right-hand Sink	22.5 ppb
GMS-80 / Room 215 Sink	10.3 ppb
GMS-84 / Room 211 Sink	23.8 ppb
GMS-92 / Room 201 Sink	19.6 ppb
GMS-94 / Room 203 Sink	34.9 ppb
GMS-96 / Room 205 Sink	12.3 ppb
GMS-98 / Room 206 Left-hand Sink	56.9 ppb
GMS-99 / Room 206 Right-hand Sink	38.4 ppb
GMS-100 / Room 207 Sink	17.8 ppb
GMS-102 / Room 208 Left-hand Sink	57.8 ppb
GMS-103 / Room 208 Right-hand Sink	84.7 ppb
GMS-104 / Room 208 Eye Wash Sink	17.6 ppb
GMS-109 / Room 99 Right-hand Sink	19.7 ppb
GMS-112 / Office I Sink	149 ppb

UES will not be able to represent that the site contains no lead-bearing water outlets beyond those detected or observed by UES during flushing and sampling activities. Copies of the drinking water analytical results are included in Appendix C.

## RECOMMENDATIONS

Our recommendations are summarized below:

- It is our understanding that the outlets identified in Table 1 have either been removed, marked as non-potable, or have otherwise been taken out of service. Should these fixtures be put back into service following remediation activities, or if replacement fixtures are to be put into service, further sampling and testing should be conducted.



\* \* \* \* \*

The following attachments are included in and complete this report:

- Figure 1 - Drinking Water Sample Locations – First Floor
- Figure 2 - Drinking Water Sample Locations – Second Floor
- Appendix A - Certificates and Licenses of Environmental Professionals
- Appendix B - Drinking Water Sampling Forms
- Appendix C - Drinking Water Laboratory Data Sheets
- Appendix D - Limitations of Report

\* \* \* \* \*

We appreciate the opportunity to provide our professional environmental consulting services to Columbia Public Schools on this project. If you have any questions or comments, please contact me at (314) 997-7440.

Very truly yours,

**UES**

Bradley J. Lohrum  
Project Manager

BJL/MSR:bjl/jsj



**NOTES**

1. Drawing not to scale.
2. Drawing adapted from "Gentry Middle School Floor Plan", provided by the client, dated 06/03/2022.
3. Sample locations were identified in the field relative to building features and are approximate only.

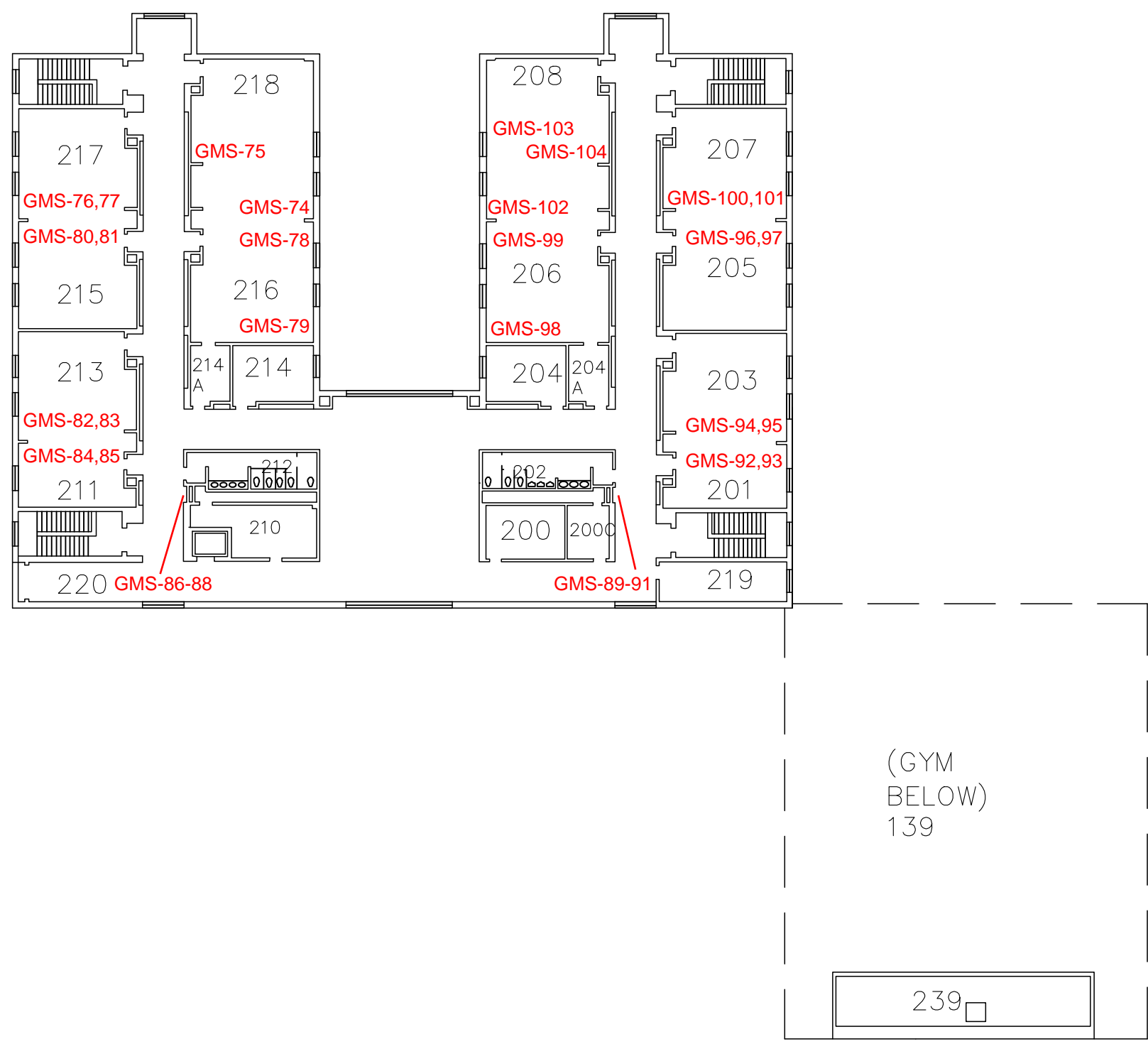
Drawn By: BJJ	Ck'd By: BJJ	App'vd By: MSR
Date: 12-21-24	Date: 12-21-24	Date: 12-21-24



4200 Bethel Street  
Columbia, Missouri

**DRINKING WATER SAMPLE LOCATIONS - FIRST FLOOR**

Project Number J044517.01	<b>FIGURE 1</b>
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**NOTES**

1. Drawing not to scale.
2. Drawing adapted from "Gentry Middle School Floor Plan", provided by the client, dated 06/03/2022.
3. Sample locations were identified in the field relative to building features and are approximate only.

Drawn By: BJL	Ck'd By: BJL	App'vd By: MSR
Date: 12-21-24	Date: 12-21-24	Date: 12-21-24



4200 Bethel Street  
Columbia, Missouri

**DRINKING WATER SAMPLE LOCATIONS - SECOND FLOOR**

Project Number J044517.01 **FIGURE 2**



## **APPENDIX A**

### **CERTIFICATES AND LICENSES OF ENVIRONMENTAL PROFESSIONALS**





**STATE OF MISSOURI**  
**DEPARTMENT OF HEALTH AND SENIOR SERVICES**

**LEAD OCCUPATION LICENSE REGISTRATION**

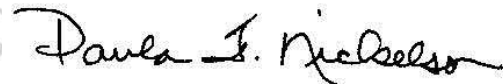
Issued to:

**Bradley J. Lohrum**

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

**Lead Risk Assessor**  
Category of License

Issuance Date: **1/20/2023**  
Expiration Date: **1/20/2025**  
License Number: **230120-300006460**



Paula F. Nickelson  
Acting Director  
Department of Health and Senior Services









## **APPENDIX B**

### **DRINKING WATER SAMPLING FORMS**



# DRINKING WATER SAMPLING FORM

Project Name: Columbia Public Schools Water  
Sampling and Reporting Services  
 Building Name: Gentry Middle School

Project Number: J044517.01  
 Address: 4200 Bethel Street  
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
GMS-01	S	Kitchen Dishwash - Left	RJH - 1/15/24 - 13:51	RJH - 1/16/24 - 24:26
GMS-02	S	Kitchen Dishwash - Right	RJH - 1/15/24 - 13:51	RJH - 1/16/24 - 24:26
GMS-03	ICE	Kitchen	JFT - 1/15/24 - 13:51	JFT - 1/16/24 - 24:26
GMS-04	S	Room 170	RJH - 1/15/24 - 13:54	RJH - 1/16/24 - 24:28
GMS-05	WF	Room 170	JFT - 1/15/24 - 13:54	JFT - 1/16/24 - 24:28
GMS-06	S	Room 171	JFT - 1/15/24 - 13:55	RJH - 1/16/24 - 24:29
GMS-07	WF	Room 171	RJH - 1/15/24 - 13:55	JFT - 1/16/24 - 24:29
GMS-08	S	Room 172	JFT - 1/15/24 - 14:00	RJH - 1/16/24 - 24:29
GMS-09	WF	Room 172	RJH - 1/15/24 - 14:00	JFT - 1/16/24 - 24:29
GMS-10	WF	Room 148	RJH - 1/15/24 - 14:04	RJH - 1/16/24 - 24:31
GMS-11	WF	Room 149	JFT - 1/15/24 - 14:05	JFT - 1/16/24 - 24:31
GMS-12	WF	Hallway at Room 150 - Left	JFT - 1/15/24 - 14:07	RJH - 1/16/24 - 24:32
GMS-13	BF	Hallway at Room 150 - Right	RJH - 1/15/24 - 14:07	JFT - 1/16/24 - 24:32
GMS-14	WF	Hallway at Room 150 - Right	RJH - 1/15/24 - 14:07	JFT - 1/16/24 - 24:32
GMS-15	S	Room 150 - Left	RJH - 1/15/24 - 14:08	JFT - 1/16/24 - 24:34
GMS-16	B	Room 150 - Left	RJH - 1/15/24 - 14:08	JFT - 1/16/24 - 24:34
GMS-17	S	Room 150 - Right	JFT - 1/15/24 - 14:08	RJH - 1/16/24 - 24:34
GMS-18	B	Room 150 - Right	JFT - 1/15/24 - 14:08	RJH - 1/16/24 - 24:34
GMS-19	S	Room 152	RJH - 1/15/24 - 14:11	RJH - 1/16/24 - 24:35
GMS-20	S	Room 154	JFT - 1/15/24 - 14:11	JFT - 1/16/24 - 24:35
GMS-21	S	Room 153 - Purple	RJH - 1/15/24 - 14:16	RJH - 1/16/24 - 24:37
GMS-22	S	Room 153 - Red	RJH - 1/15/24 - 14:16	RJH - 1/16/24 - 24:37
GMS-23	S	Room 153 - Blue	RJH - 1/15/24 - 14:16	RJH - 1/16/24 - 24:37
GMS-24	S	Room 153 - Green	JFT - 1/15/24 - 14:16	JFT - 1/16/24 - 24:37
GMS-25	S	Room 153 - Yellow	JFT - 1/15/24 - 14:16	JFT - 1/16/24 - 24:37

BF=Bottle Filling  
 B=Bubbler

FW=Filtered Water  
 ICE=Ice Machine

S=Classroom/Other Sink  
 WF=Water Fountain

**DRINKING WATER SAMPLING FORM**

Project Name: Columbia Public Schools Water  
Sampling and Reporting Services  
 Building Name: Gentry Middle School

Project Number: J044517.01  
 Address: 4200 Bethel Street  
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
GMS-26	S	Room 153 - Orange	JFT - 1/15/24 - 14:16	JFT - 1/16/24 - 24:37
GMS-27	S	Room 155	RJH - 1/15/24 - 14:18	JFT - 1/16/24 - 24:38
GMS-28	S	Room 160	RJH - 1/15/24 - 14:22	RJH - 1/16/24 - 24:40
GMS-29	B	Room 160	RJH - 1/15/24 - 14:22	RJH - 1/16/24 - 24:40
GMS-30	S	Room 162	JFT - 1/15/24 - 14:24	JFT - 1/16/24 - 24:41
GMS-31	S	Room 163	RJH - 1/15/24 - 14:27	RJH - 1/16/24 - 24:42
GMS-32	S	Room 164	JFT - 1/15/24 - 14:29	JFT - 1/16/24 - 24:42
GMS-33	S	Room 165 - Left	JFT - 1/15/24 - 14:31	RJH - 1/16/24 -24:43
GMS-34	S	Room 165 - Left Center	JFT - 1/15/24 - 14:31	RJH - 1/16/24 - 24:43
GMS-35	S	Room 165 - Right Center	RJH - 1/15/24 - 14:31	RJH - 1/16/24 - 24:43
GMS-36	S	Room 165 - Right	RJH - 1/15/24 - 14:31	RJH - 1/16/24 - 24:43
GMS-37	S	Room 166	JFT - 1/15/24 - 14:34	JFT - 1/16/24 - 24:44
GMS-38	S	Room 167 - Left	JFT - 1/15/24 - 14:36	JFT - 1/16/24 - 24:46
GMS-39	S	Room 167 - Left Center	JFT - 1/15/24 - 14:36	JFT - 1/16/24 - 24:46
GMS-40	S	Room 167 - Right Center	JFT - 1/15/24 - 14:36	JFT - 1/16/24 - 24:46
GMS-41	S	Room 167 - Right	JFT - 1/15/24 - 14:36	JFT - 1/16/24 - 24:46
GMS-42	S	Room 168	RJH - 1/15/24 - 14:37	RJH - 1/16-24 - 24:46
GMS-43	BF	Hallway at Room 101 - Left	RJH - 1/15/24 - 14:47	RJH - 1/16/24 - 24:49
GMS-44	WF	Hallway at Room 101 - Left	RJH - 1/15/24 - 14:47	RJH - 1/16/24 - 24:49
GMS-45	WF	Hallway at Room 101 - Right	RJH - 1/15/24 - 14:47	JFT - 1/16/24 - 24:49
GMS-46	S	Room 101	RJH - 1/15/24 - 14:48	RJH - 1/16/24 - 24:51
GMS-47	B	Room 101	RJH - 1/15/24 - 14:48	RJH - 1/16/24 - 24:51
GMS-48	S	Room 103	RJH - 1/15/24 - 14:49	JFT - 1/16/24 - 24:51
GMS-49	B	Room 103	RJH - 1/15/24 - 14:49	JFT - 1/16/24 - 24:51
GMS-50	S	Room 105	RJH - 1/15/24 - 14:51	RJH - 1/16/24 - 24:52

BF=Bottle Filling  
 B=Bubbler

FW=Filtered Water  
 ICE=Ice Machine

S=Classroom/Other Sink  
 WF=Water Fountain











## **APPENDIX C**

### **DRINKING WATER LABORATORY DATA SHEETS**































































































































## **APPENDIX D**

### **LIMITATIONS OF REPORT**

## **ENVIRONMENTAL SAMPLING LIMITATIONS OF REPORT**

1. The Report has been prepared on behalf of and for the exclusive use of the addressee, solely for use in documenting specific sample results. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of UES.
2. The sampling was performed in accordance with generally accepted practices of other consultants undertaking similar projects at the same time and in the same geographical area, and UES endeavored to observe that degree of care and skill ordinarily exercised by other consultants under similar circumstances and conditions. The findings and conclusions stated herein must be considered not as scientific certainties, but rather as professional opinions concerning the significance of the limited data gathered during the course of the project. UES does not and cannot represent that the site contains no hazardous waste or material, or other latent condition beyond that observed by UES.
3. In the event that information is developed relative to environmental or hazardous waste or material issues at the site and not contained in this report, such information shall be brought to UES' attention. UES will evaluate such information and, based on this evaluation, may modify the conclusions stated in this Report.
4. The conclusions and recommendations contained in this Report are based in part upon the data obtained from a limited number of water samples. The identified presence of contaminated water is limited to the extent that they could be identified by instrumentation and sampling and testing. There is a potential for contaminated water above the indicated concentrations to occur elsewhere on the site. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, and/or if changes are made in regulations, it will be necessary to reevaluate the conclusions and recommendations of this report.
5. If quantitative laboratory testing was performed as part of the assessment by an outside laboratory, UES has relied upon the data provided, and has not conducted an independent evaluation of the reliability to these data.
6. Chemical analyses have been performed for specific parameters during the course of this sampling as described in the text. Do not assume that a given analyte is not present at the site simply because it was not present at the test locations. The analyte may exist on the site where tests were not performed. In addition, it should be noted that additional chemical constituents not tested for during the sampling could be present in water at the site.